

## **ADDENDUM NO. 3**

**TO:** All Bidders and Plan Holders  
**FROM:** Charlie Shell, Principal Engineer  
**PROJECT:** Construction of NE Veterans Drive – Phase II (No. 10444)  
**DATE:** February 1, 2013

**This addendum to the contract documents is issued to clarify, correct, and supplement the drawings and contract documents issued as “Construction of NE Veterans Drive – Phase II”, bid closing date January 31st, 2013. (REVISED BID OPENING DATE: February 7<sup>th</sup>, 2013)**

**Please be advised of the following revisions to the bid documents:**

***Changes to Supplemental Specifications:***

Supplemental Specification #3 – Time of Award, Schedule, and Completion

Delete the existing Supplemental Specification #3, Time of Award, Schedule, and Completion and replace with the following;

**3. Time of Award, Project Schedule, and Completion**

The anticipated time of award for this project is the February 19<sup>th</sup>, 2013 Hillsboro City Council meeting held at 7:00 p.m. in the Hillsboro Auditorium, Hillsboro Civic Center, 150 East Main Street, Hillsboro, OR 97123.

The Washington County Fair and the Hillsboro Air Show are both scheduled to occur during the last weekend of July 2013. The contractor shall have the Veterans Drive travel lanes and bike lanes between NE 34<sup>th</sup> Avenue and Brookwood Parkway paved and open for traffic by July 19<sup>th</sup>, 2013. All sidewalks between NE 34<sup>th</sup> Avenue and the proposed driveways at 39+00 shall also be completed by July 19<sup>th</sup>, 2013. All concrete must be tested and must meet minimum strength requirements prior to opening to traffic.

The contractor will provide a project schedule at the preconstruction meeting outlining the tasks and timelines required to meet this schedule. Should the contractor fall behind schedule, the contractor will be required to use high early strength concrete in order to meet the schedule. The contractor will not receive any additional compensation for the additional costs incurred to bring the project back on schedule. Extensions of schedule will not be allowed due to weather.

After July 19<sup>th</sup>, the contractor will be required to cease work until the completion of the fair and air show. (An exception may be made if it can be shown that the proposed activities will not interfere with the use of the roadway and sidewalks to provide access to the fair and air show.) The contractor will be responsible for completing any site cleanup necessary to make the area safe to the traveling public.

Upon completion of these events, the newly constructed Veterans Drive will be closed to traffic until the completion of the remaining construction work. All work within this contract shall be complete, tested, and accepted by the City of Hillsboro by October 11<sup>th</sup>, 2013. If necessary, this final deadline may be extended to November 15, 2013 to allow landscaping to be planted under more favorable weather conditions.

It is the responsibility of the prospective bidders to note the contents of this addendum and that the owner is made aware that the addendum has been received. Acknowledge receipt by noting addendum number and date of receipt on the signature page following the bid proposal form (Section X) and return all addendums with the bid packet on February 7<sup>th</sup>, 2013 at 2:00 p.m.

**Bidder**            Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Acknowledged receipt by: \_\_\_\_\_

## **ADDENDUM NO. 2**

**TO:** All Bidders and Plan Holders

**FROM:** Charlie Shell, Principal Engineer

**PROJECT:** Construction of NE Veterans Drive – Phase II  
No. 10444

**DATE:** January 30, 2013

**This addendum to the contract documents is issued to clarify, correct, and supplement the drawings and contract documents issued as “Construction of NE Veterans Drive – Phase II”, bid closing date January 31st, 2013.**

**Please be advised of the following revisions to the bid documents:**

***Changes to the Bid Closing/Opening Date:***

The bid closing/opening date and time have changed from January 31<sup>st</sup>, 2013 at 2:00 PM to **February 7<sup>th</sup>, 2013 at 2:00 PM**. First Tier Subcontractor Disclosure forms must be submitted within two hours of the new bid closing time and date. The anticipated time of City Council award (February 19<sup>th</sup>, 2013) for this project and the project schedule for completion remain unchanged.

***Changes to the Section IX Bid Proposal Form:***

These changes apply to the Bid Proposal Form. A new bid proposal form is provided with this addendum. Please replace the entire Bid Proposal Form in the bid book. The following bid quantities have been revised by this addendum.

- 27. Furnish and Install 3-1/2” concrete sidewalks

***Changes to the Special Specifications:***

**Special Specification #6 – Furnish and Install Catch Basins, ditch inlets, and drains.**

Add the Following: The unit price bid for sidewalk drains shall include all costs to furnish and install a minimum of five cleanouts.

**Special Specification #13 – Excavation.**

Add the Following: With the exception of trench spoils, excavation quantities include all excavated material including any to be reused on site for embankment or topsoil.

**Special Specification #25 – Raise Existing Structures to Final Grade**

Add the Following: Adjustment of existing manhole rims and access hatches will not exceed twelve inches and will be made utilizing grade rings.

It is the responsibility of the prospective bidders to note the contents of this addendum and that the owner is made aware that the addendum has been received. Acknowledge receipt by noting addendum number and date of receipt on the signature page following the bid proposal form (Section X) and return all addendums with the bid packet on February 7<sup>th</sup>, 2013 at 2:00 p.m.

**Bidder**            Name: \_\_\_\_\_

                      Address: \_\_\_\_\_

\_\_\_\_\_

Acknowledged receipt by: \_\_\_\_\_

## SECTION IX BID PROPOSAL FORM

### CONSTRUCTION OF NE VETERANS DRIVE (10444) Phase Two

Furnish all equipment, materials and labor required to complete the construction of public streets, storm sewer, and waterline improvements. Proposed street improvements are approximately 2300 linear feet in length and include curb and gutter, raised bike lanes, sidewalks, asphalt and concrete paving, street lighting, signing and striping, traffic signals, landscaping, irrigation, and other associated work.

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1.	Mobilization, Bond, Insurance	LS	1		
2.	Site Preparation , Clearing and Grubbing including brush and tree removal	L.S.	1		
3.	Furnish, Install and Maintain Erosion Control Measures	LS	1		
4	Traffic Control	LS	1		
<b>STORM SEWER</b>					
5	Furnish and Install Storm Pipe, full depth rock backfill				
	a) 10" C-900 Storm Pipe	L.F.	447		
	b) 6" C-900 Storm Pipe	L.F.	300		
6	Furnish and Install Catch Basins,Ditch Inlets, Drains				
	a) CG-2	EA.	16		
	b) CG-30	EA.	2		
	c) Area Drain	EA.	1		
	d) 12" Diameter Landscape Drain	EA.	16		
	e) Sidewalk Drain (SD1 of C100D)	LF	1331		
7	Connect to existing manhole;				
	a) Existing knock-out provided	EA.	9		
	b) Core Drill into manhole	EA	2		

8	Furnish and Install Tees				
	a) Inserta Tee (36" by 10")	EA	6		
	b) 6" C-900 Tees	EA	14		
9	Remove Inlet in Brookwood and construct 48" Manhole over existing storm line	LS	1		
10	Remove and/or abandon existing storm pipe/structures	LS	1		
	<b>WATERLINE INSTALLATION</b>				
11	Furnish and Install 12" Class 52 Ductile Iron Pipe:	LF	106		
12	Waterline Details				
	a) Detail A - 12" Wet Tap	EA	1		
	b) Detail B - 12" MJ Bend	EA	5		
	c) Detail C - 4" Blowoff Assembly	EA	1		
	d) Detail D - Relocate Existing Waterline	EA	1		
	<b>ROADWAY CONSTRUCTION</b>				
13	Excavation - includes removal of all spoils	CY	14,342		
14	Embankment - cement amended fills	CY	2050		
15	Sub grade Preparation / Cement Amendment	SY	14,000		
16	Furnish and Install 6" of 1-1/2" minus Base Rock in street sections and under Bike Lane	cu. yd.	2,160		
17	Furnish and Install 2" of 3/4" minus Leveling Rock in street sections and under Bike Lane	cu. yd.	720		
18	Furnish and Install Mountable Curb and Gutter per detail C2-100B	LF	4,377		

19	Furnish and Install Modified City Curb and Gutter per detail C1-100B	LF	4,158		
20	Furnish and Install Mod. Washington County Standard Curb and Gutter (Center median Brookwood Pkwy.) per detail C3-106	LF	61		
21	Furnish and Install Washington County Standard Curb and Gutter (Brookwood Parkway) per detail C4-106	LF	328		
22	Furnish and Install Asphalt (Brookwood Parkway)				
	a) Level 3, 3/4" Dense Graded	ton	185		
	b) Level 3, 1/2" Dense Graded	ton	46		
23	Furnish and Install 11" thick PCC Pavement	SY	8,245		
24	Furnish and Install Impact Slabs	SF	510		
25	Raise Existing Structures to Final Grade				
	a) Manhole Rims	each	22		
	b) Contech Water Quality 3' by 9' Access Hatches	each	2		
26	Furnish and Install 6" thick concrete cycle track. (bike lanes)	SY	3,242		
27	Furnish and Install 3-1/2" Conc. Sidewalks (includes 3/4" minus base rock)	SF	39,848		
28	Furnish and Install 6" thick Conc. Driveways with mesh reinforcement (includes 3/4" minus base rock)	SF	3,081		
29	Furnish and Install Handicap Ramps	EA	6		
30	Furnish and Install Truncated Domes	SF	166		

	<b>MISCELANEOUS</b>				
<b>31</b>	Foundation Stabilization measured in place (price includes excavation)	cu. yd.	400		
<b>32</b>	Saw Cut existing asphalt	L.F.	2,000		
	<b>STREET LIGHTING</b>				
<b>33</b>	Furnish and Install Street Lighting System Complete	LS	1		
	<b>TRAFFIC SIGNALS, SIGNING AND STRIPING</b>				
<b>34</b>	Furnish and Install Traffic Signals at Brookwood Parkway	LS	1		
<b>35</b>	Furnish and Install Traffic Signs complete with perforated post breakaway sign supports or steel band connections as indicated on the plans.				
	(a) - No Parking Bike Lane	each	16		
	(b) - Speed 35	each	2		
	(c) - Speed Reduction	each	2		
	(d) - Keep Right	each	3		
	(e) - Ahead	each	1		
	(f) - Pedestrian	each	1		
	(g) - Roundabout	each	1		
	(h) - Bikes Entering Roadway	each	1		
	(i) - Bike Lane Ends	each	1		
	(j) - Brookwood Pkwy Next Signal	each	1		
	(k) - Cornell Next Signal	each	1		
	(l) - Veterans Next Signal	each	2		
	(m) - Right Lane Must Turn Right	each	1		
	(n) - Begin Right Turn Lane - Yield to Bikes	each	1		
	(o) - NE Brookwood Pkwy street name sign	each	1		
	(p) - NE Veterans Dr street name sign	each	2		
<b>36</b>	Furnish and Install All Pavement Striping and Markings per plan.	LS	1		



	<b>LANDSCAPING AND RESTORATION</b>				
37	Furnish and install irrigation system complete	LS	1		
38	Furnish and install 12" of Top Soil in landscape strip and center median per plans	CY	1362		
39	Furnish and Install Street Trees				
	a) Village Green - Zelkova Serrata	each	54		
	b) Lavalley Hawthorne	each	4		
	c) Paperbark Maple	each	46		
	d) Tricolor Beech	each	33		
40	Furnish and Install Landscaping Shrubs and Groundcover per plans				
	a) Abotswood Potentilla	each	40		
	b) Kinnikinnick	each	3491		
	c) Lowfast Cotoneaster	each	896		
	d) Creeping Broom	each	1383		
	e) Winter Creeper	each	211		
41	Additional Grading and Hydroseeding	LS	1		
42	Restoration of Landscaping and Other Items Disturbed by Construction	LS	1		
43	Extra Work	T&M			\$ 50,000.00
	<b>TOTAL</b>				

## **ADDENDUM NO. 1**

**TO:** All Bidders and Plan Holders

**FROM:** Charlie Shell, Principal Engineer

**PROJECT:** Construction of NE Veterans Drive – Phase II  
No. 10444

**DATE:** January 25, 2013

**This addendum to the contract documents is issued to clarify, correct, and supplement the drawings and contract documents issued as “Construction of NE Veterans Drive – Phase II”, bid closing date January 31st, 2013.**

**Please be advised of the following revisions to the bid documents:**

### ***Changes to the Construction Plans:***

#### Traffic Signal Plans

Sheets TS-1, TS-2, TS-4, TS-5, TS-8, TS-9, TS-10, of the traffic signal plans have been revised. The revised sheets issued with this addendum shall replace those sheets previously issued.

#### Illumination Plans

Sheets 1, 3, and 6 of the Illumination plans have been revised. The revised sheets issued with this addendum shall replace those sheets previously issued.

### ***Clarifications:***

1. Sheet C-103 contains a typo for the length of 10” C-900 pipe shown at station 51+14.75. The length of pipe should be 12 feet; not 184 feet. There is no change to the total quantity of 10” C-900 pipe shown in the Bid Proposal Form.
2. Sheet S-106, note 3, indicates that cold tape inlaid stripping shall be installed at the time of paving. All paving for Veterans Drive will be concrete with 3M 380 IES cold tape to be applied with SPA 60 glue after paving.
3. All pavement markings on sheet SS-4 apply to the asphalt on Brookwood Parkway and will be thermoplastic.
4. The existing 36” storm line is ADS N-12 west of station 53+28. The existing 36” storm line is reinforced concrete east of station 53+28.
5. The Area Drain to be installed at station 53+28 will be a ditch inlet as shown on sheet C-100D.
6. The drain rock in the sidewalk drain detail shown on C-100D will be ¾” to 1¼” drain rock with no fines.
7. The existing storm line in Brookwood Parkway (Sta. 72+46) to be filled with grout is 12 inch in diameter.
8. The excavation quantity in the Bid Proposal Form includes all site strippings.

It is the responsibility of the prospective bidders to note the contents of this addendum and that the owner is made aware that the addendum has been received. Acknowledge receipt by noting addendum number and date of receipt on the signature page following the bid proposal form (Section X) and return with the bid packet on January 31<sup>st</sup>, 2013 at 2:00 p.m.

**Bidder**            Name: \_\_\_\_\_

                      Address: \_\_\_\_\_

\_\_\_\_\_

Acknowledged receipt by: \_\_\_\_\_

LEGEND

CONTROLLERS

- (C) Controller (See Signal Plan).
- (C/332) Install model 2070 controller and control equipment in model 332 cabinet with riser frame, orient louvered door as shown
- (EX/C) Retain and protect existing controller and cabinet.

POLES

- (MA/L) Install (L=length) foot traffic signal mast arm.
- (LA/L) Install (L=length) foot luminaire arm.
- (PP) Install pedestrian signal pedestal with frangible base.
- (MPL/T) Install Type (T = Type) standard traffic signal mast arm pole with luminaire pole extension (35 ft. mounting height), as per Drg. No.'s 6910 and 9620. See sheets TS-6 and TS-7.

SIGNS

- (SWS/N) Install street name sign (N) on mast arm, use 12" 0.125mm flat blade aluminium blanks mounted to mast arm with stainless steel bands and hardware (diamond grade sheeting). See sign detail sheet SS-2.
- (AL/5L) Install aluminum (30"x36", type "W7") left arrow "ONLY" sign (R3-5R)
- (AL/12) Install aluminum (30"x36", type "W7 Mod.") Right turn yield to peds on green " " sign (OR22-14)
- (AL/5R) Install aluminum (30"x36", type "W7") left arrow "ONLY" sign (R3-5R)
- (CW) Install crosswalk closure barricades with signs (both side of barricade). See TM490.

JUNCTION BOXES

- (RX/JB) Remove existing junction box.
- (EX/JB) Retain and protect existing junction box.
- (JB/3) Install 30"x17"x12" (min. dimension) precast concrete junction box.
- (JB/3A) Install 30"x17"x12" (min. dimension) precast concrete junction box with concrete apron.
- (JB/3T) Install 30"x17"x12" (min. dimension) tandem precast concrete junction box. (See ODOT TM472)
- (JB/C) Install 36"x24"x24" (min. dimension) polymer concrete communications junction box. See sheet TS-8.
- (JB/IC) Junction box (See Interconnect Plan)

SIGNALS

- (V/Ph) Install phase (Ph=phase) vehicle signal
- (C/B/Ph) Install phase (Ph=phase) countdown pedestrian signal with clamshell mount and pushbutton with 'H' mount.

LEGEND CONTINUED

WIRES

- (N) Install (N=number) No. 14 AWG size wire type THWN wires
- (N-12C) Install (N=number) No. 12 type THWN (Pedestrian signal system common)
- (N-C) Install (N=number) No. 8 type THWN (Signal system common)
- (N/G) Install (N=number) No. (G=AWG wire size) type XHHW wires
- (N/G) Install (N=number) No. (G=AWG wire size) type THWN wires
- (Ph) Includes 3 spare wires for phase (Ph=phase) as per table
- (N/P) Install (N=number) twisted pair PE-39 (gel filled) Interconnect Cable
- (PL) Install poly pull line

CABINETS

- (BMCL) Install base mounted service cabinet, 120/240 volt metered, for signal and signal pole mounted illumination systems.
- (TC) Install terminal cabinet.

CONDUITS

- (S) Install (S=size) inch electrical conduit
- (EC) Electrical conduit (See Signal Plan)
- (W) Install conduit and wire as required by power company
- (IC) Interconnect conduit (See Interconnect Plan)
- (CS) Install 2" conduit stub (For future use, cap ends)
- (EX/TC) Retain and protect existing interconnect conduit
- (AX/TC) Abandon existing interconnect conduit
- (EX/EC) Retain and protect existing electrical conduit
- (HDD) Install conduit by horizontal directional drilling. Open trench not allowed.

LUMINAIRES

- (LED) Install LED luminaires at signal (Leotek GC2 street light).
- (PE/I) Install photocontrol electronic relay on pole, as per T.R.S. Drg. No. TM465.

FIRE PREEMPTION

- (FF/Ch) Install channel (Ch=channel) fire preemption detector feeder cable.
- (FN/Ch) Install channel (Ch=channel), (N=number) barrel fire preemption detector unit.

VIDEO DETECTION

- (VDC/N) Install variable focal length video detection camera housing and sunshield number (N=number).
- (VDF/N) Install video detection coaxial feeder and power cable (N=number).
- (VDP/Ph) Video detection zone for phase (Ph = phase).

COMMUNICATIONS

- (ES/930L) Install Ruggedcom RS930L edge switch.
- (CP/DSU) Install communications panel for twisted pair copper. See sheet IC-9.

SIGNAL MOUNTING OPTIONS

B = Adjustable signal bracket assembly w/rain cap(s)  
(Install 1 inch metallic chase nipple)

SIGNAL HEAD TYPES

2 = 12" R, 12" Y, 12" G  
5 = 12" R, 12" Y, 12" G, 12" YRTA, 12" GRTA  
6LX= 12" RLTA, 12"YLTA, 12" FYLTA/12" GLTA (Bi-Modal Display)

VIDEO CAMERA MOUNTING OPTIONS

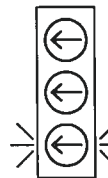
MA = Mast arm mount  
LA = Luminaire arm mount  
AB = Adjustable Bracket  
MA = Mast Arm

GENERAL NOTES:

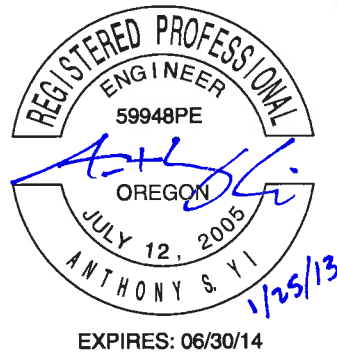
- All materials and workmanship shall conform to Washington County ordinances and special provisions, the 2008 Oregon Standard Specifications for Construction, and the Oregon Standard Drawings listed below.
- The CONTRACTOR shall supply all equipment, materials, and labor required for the signal operations shown on this plan. All signal control equipment shall be tested at the ODOT signal lab in Salem at the CONTRACTORS expense.
- The CONTRACTOR shall verify the locations of existing utilities and coordinate this work with the utility companies/agencies to eliminate any conflicts.
- The CONTRACTOR shall coordinate work with PGE for power service connection. The contractor shall install conduit and wiring to the power source as required by PGE. The CONTRACTOR shall coordinate with PGE (Service Desk, 503-736-5450) for all power requirements.
- The ENGINEER shall field verify the location of all signal equipment before installation.
- Washington County will provide signal field testing services at the CONTRACTORS expense.
- Washington County will provide signal timing.



TYPE 5  
SIGNAL HEAD



TYPE 6LX  
SIGNAL HEAD



PROJECT NUMBER  
10444



WASHINGTON COUNTY  
OREGON  
DEPARTMENT OF  
LAND USE &  
TRANSPORTATION

BY DATE  
DRWN AMT 01/13  
DSGN ASY 01/13  
CHKD CWR 01/13

N.E. VETERANS DR. -  
N.E. BROOKWOOD PKWY.  
WASHINGTON COUNTY

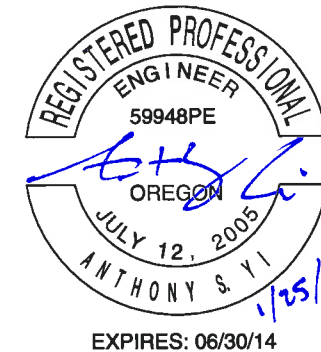
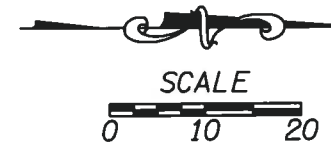
TRAFFIC SIGNAL PLANS

ACCOMPANIED BY DWGS. TM450, TM457,  
TM458, TM460, TM462, TM465, TM467,  
TM470, TM472, TM482, TM485, TM488,  
TM490 & SHEETS TS-2 Thru TS-10

SHEET NO.  
1 OF 10  
SHEET TITLE  
TS-1

H:\profile\11200 - Veterans Drive Signal and Roundabout\dwgs\design\100%\11200\_sig\_100.dwg Jan 25, 2013 - 9:50am Layout Tab: TS02

POWER SOURCE (PGE TRANSFORMER TO BE LOCATED IN THE SOUTHWEST CORNER OF THE N.E. VETERANS DRIVE/N.E. BROOKWOOD PARKWAY INTERSECTION. COORDINATE TRANSFORMER INSTALLATION WITH PGE. TOD SHATTUCK (503) 844-5354.J



PROJECT NUMBER  
10444



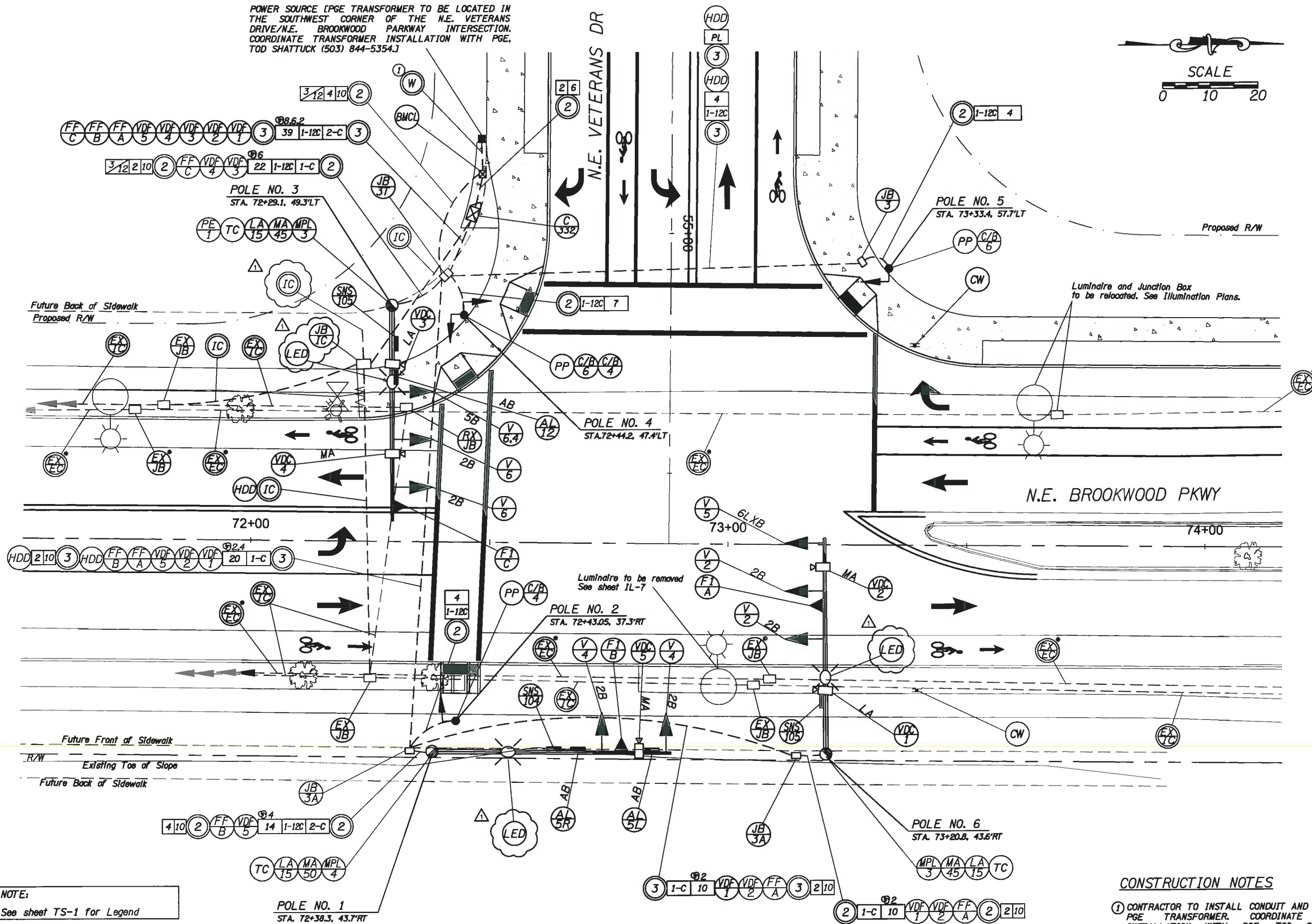
WASHINGTON COUNTY  
OREGON  
DEPARTMENT OF  
LAND USE &  
TRANSPORTATION

BY DATE  
DRWN AMT 01/13  
DSGN ASY 01/13  
CHKD CWR 01/13

N.E. VETERANS DR. -  
N.E. BROOKWOOD PKWY.  
WASHINGTON COUNTY

TRAFFIC SIGNAL PLANS

SHEET NO.  
2 OF 10  
SHEET TITLE  
TS-2



NOTE:  
See sheet TS-1 for Legend

NOTE:  
Field Verify Measurements Before Construction

CONSTRUCTION NOTES

- CONTRACTOR TO INSTALL CONDUIT AND WIRING TO NEW PGE TRANSFORMER. COORDINATE TRANSFORMER INSTALLATION WITH PGE, TOD SHATTUCK (503) 844-5354.
- DENOTES CONDUIT OR JUNCTION BOX ASSOCIATED WITH EXISTING ILLUMINATION SYSTEM.



## GENERAL NOTES

1. CONTRACTOR SHALL INSTALL AND COIL INTERCONNECT CABLE IN TRAFFIC SIGNAL CABINETS. WASHINGTON COUNTY WILL TERMINATE INTERCONNECT CABLE IN TRAFFIC SIGNAL CABINETS.
2. CONTACT KEVIN ELLINGTON AT (503) 846-7959 FOR ACCESS INTO TRAFFIC SIGNAL CABINETS.
3. LABEL AND TAG ALL EQUIPMENT IN CABINETS, JUNCTION BOXES, COMMUNICATION PANELS, ETC. EQUIPMENT TO BE LABELED INCLUDES: CAT 5 CABLE, INTERCONNECT CABLE, CAMERA CABLES, & PATCH CORDS. LABELING SHALL BE AS FOLLOWS:

### CABLE IDENTIFICATION AND MARKING

BETWEEN COMPONENTS IN THE CABINETS - ALL CABLES AND WIRING BETWEEN SUBSYSTEMS SHALL BE CLEARLY AND PERMANENTLY LABELED. ALL CONDUCTORS SHALL BE MARKED BY MEANS OF IMPRINTED TUBULAR WHITE OR YELLOW PLASTIC WIRE MARKERS. LABELS SHALL BE PLACED AT BOTH TERMINATION POINTS OF THE CONDUCTOR AND AT/NEAR ITS MID-POINT. MARKER NOMENCLATURE SHOULD BE CLEARLY VISIBLE WITH LITTLE NEED FOR MOVING WIRES OR MARKERS.

- LABELS PLACED AT TERMINATION POINTS SHALL BE WITHIN TWO INCHES OF WIRE TERMINATION AND INCLUDE THE TERMINATION ADDRESS OF THE COMPONENT TO WHICH IT IS CONNECTED (I.E. "PORT 10 TX").
- THE MID-POINT OF THE CABLE SHALL BE LABELED TO INDICATE CABLES PURPOSE (I.E. COM TO BROOKWOOD/VETERANS, CAMERA POWER, ETC.).

FUNCTION, ADDRESS AND LOCATION NAMES MAY BE ABBREVIATED BUT NEED TO BE CLEARLY UNDERSTANDABLE.

INTERCONNECT CABLES LEAVING/ENTERING CABINETS - LABEL TERMINAL ENDS OF EACH CABLE WITH "WASHCO IC" AND THE NEXT TERMINATION POINT (I.E. "TO BROOKWOOD/CORNELL").

1. INTERCONNECT CABLES IN JUNCTION BOXES AND VAULTS - TAG AND LABEL ALL CABLING IN A PERMANENT AND CONSISTENT MANNER. ALL TAGS SHALL BE OF A LONG LIFE MATERIAL AND SHALL BE MARKED WITH PERMANENT INK ON NON-METAL TYPES, OR EMBOSSED LETTERING ON METAL TAGS. METAL TAGS SHALL BE CONSTRUCTED OF STAINLESS STEEL. LABELS SHALL BE AFFIXED TO THE CABLE PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL NOT BE AFFIXED IN A MANNER WHICH WILL CAUSE DAMAGE TO THE CABLE. HANDWRITTEN LABELS SHALL NOT BE ALLOWED. - LABEL TERMINAL ENDS OF EACH CABLE WITH "WASHCO IC" AND THE NEXT TERMINATION POINT (I.E. "TO BROOKWOOD/CORNELL").

COMMUNICATION SUB COMPONENTS - ALL COMMUNICATION SUBSYSTEM COMPONENTS SHALL BE CLEARLY AND PERMANENTLY LABELED. CLEARLY MARK ALL DEVICES WITH A PERMANENT LABELING DEVICE IDENTIFYING EQUIPMENT, ITS PURPOSE, AND ITS CONNECTIONS.

## CONSTRUCTION NOTES

1. INSTALL NEW 6-PAIR INTERCONNECT CABLE WITHIN EXISTING INTERCONNECT CONDUIT FOR APPROXIMATELY 4,100 FEET SOUTH TO THE EXISTING TRAFFIC SIGNAL CONTROLLER LOCATED AT THE SOUTHWEST QUADRANT OF THE BROOKWOOD/MAIN-BASELINE INTERSECTION. USE EXISTING PULL LINE. COIL APPROXIMATELY 10 FEET OF INTERCONNECT CABLE IN EACH JUNCTION BOX.
  2. COIL APPROXIMATELY 15 FEET OF INTERCONNECT CABLE IN TRAFFIC SIGNAL CABINET.
  3. COIL APPROXIMATELY 10 FEET OF INTERCONNECT CABLE IN EACH JUNCTION BOX.
- DENOTES CONDUIT OR JUNCTION BOX ASSOCIATED WITH EXISTING ILLUMINATION SYSTEM.



EXPIRES: 06/30/14

PROJECT NUMBER  
10444



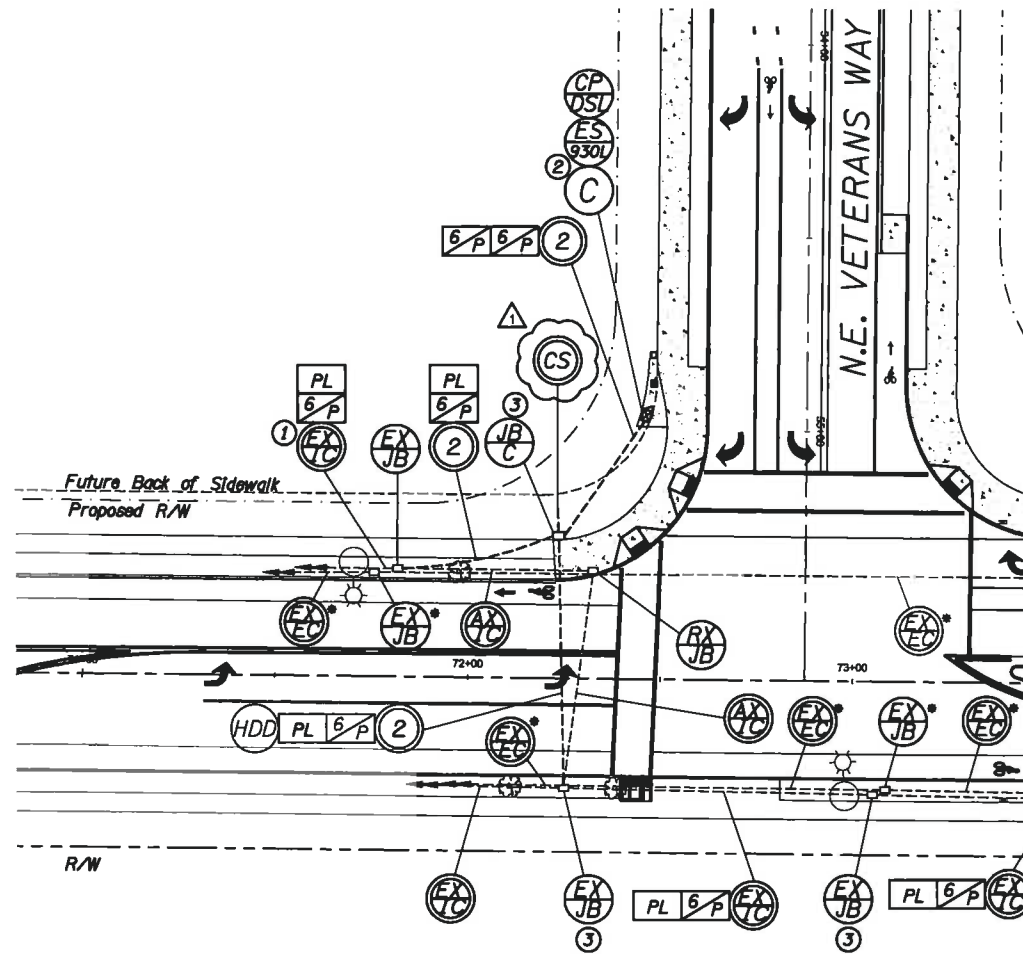
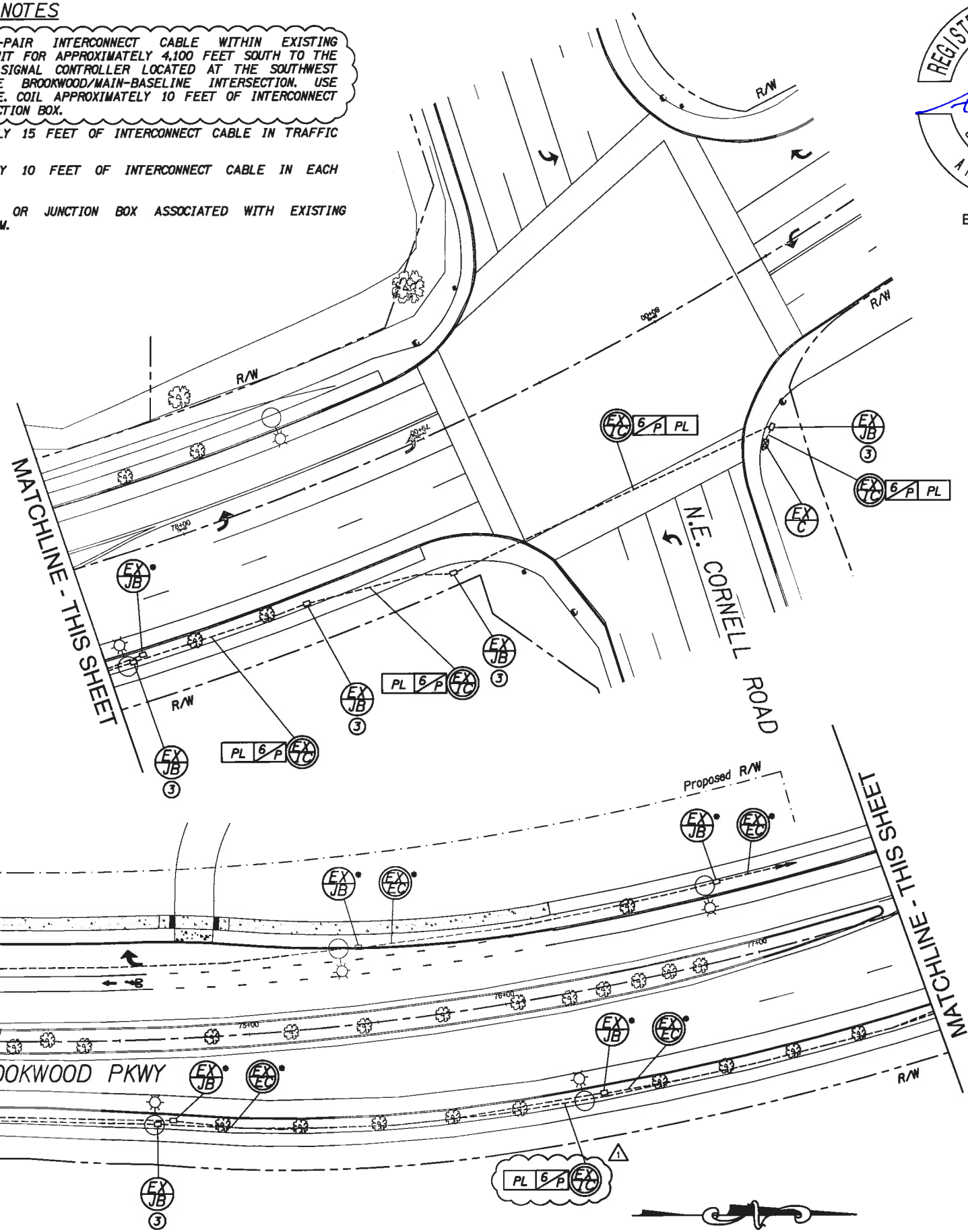
WASHINGTON COUNTY  
OREGON  
DEPARTMENT OF  
LAND USE &  
TRANSPORTATION

BY DATE  
AMT 01/13  
DSGN 01/13  
CHKD CWR 01/13

N.E. VETERANS DR. -  
N.E. BROOKWOOD PKWY.  
WASHINGTON COUNTY

TRAFFIC INTERCONNECT PLAN

SHEET NO.  
4 OF 10  
SHEET TITLE  
TS-4



NOTE:  
Field Verify Measurements Before Construction

"UTILITIES NOT SHOWN"  
Contractor to contact utility  
companies for field locations.

NOTE:  
See sheet TS-1 for Legend

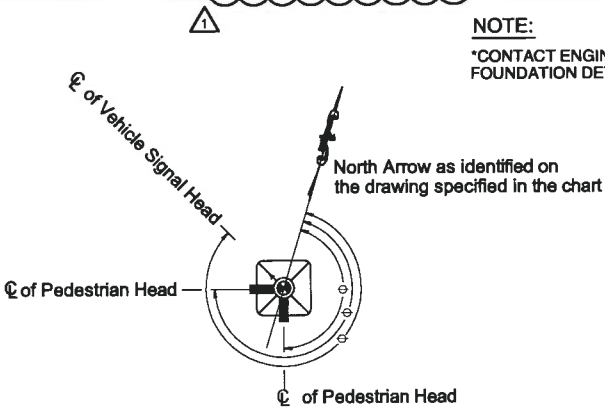
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POLE ENTRANCE CHART

				EQUIPMENT ON POLE							EQUIPMENT ON MAST ARM (Length in Feet and Equipment Type)										LUMINAIRES (Length in Feet)							FOUNDATION INFORMATION		
POLE NO.	DWG. NO.	TYPE	STRAIN POLE "A"	MAST ARM ORIENTATION (RELATIVE TO NORTH ARROW)	PED. SIGNAL DEG.	TERM. CABINET DEG.	SIGN DEG.	TRAFFIC SIGNAL DEG.	PHOTO CELL DEG.	FIRE PRE-EMPTION	ARM LENGTH											ARM LENGTH	ARM DEG.	MOUNTING HEIGHT	FIXTURE				STANDARD FOOTING TYPE	REQUIRED FOOTING DEPTH
												D1	D2	D3	D4	D5	D6	D7	D8	D9	D10				TYPE	TYPE	NO. OF LEDs	DRIVE CURRENT		
1	TS-2	MPL4	-	0	-	180	-	-	-	-	50.0	0.5 V2	4.0 SA	6.5 VDC	10.5 F	14.5 V2	19.0 SA	24.5 ST	-	-	-	15	0	35	LED	M-C-III	120E	700 mA	MPL4*	10.5'
2	TS-2	PP	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	TS-2	MPL3	-	90	-	180	-	-	180	-	45.0	3.0 F	7.0 V2	14.0 VDC	17.0 V2	27.0 V5	30.0 SA	37.0 ST	-	-	-	15	0	35	LED	M-C-III	120E	700 mA	MPL3*	10.5'
4	TS-2	PP	-	-	180,270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	TS-2	PP	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	TS-2	MPL3	-	270	-	180	-	-	-	-	45.0	1.0 V6LX	6.0 VDC	11.0 V2	14.0 F	21.0 V2	34.0 ST	-	-	-	15	0	35	LED	M-C-III	120E	700 mA	MPL3*	10.5'	

BRACKET MOUNT:

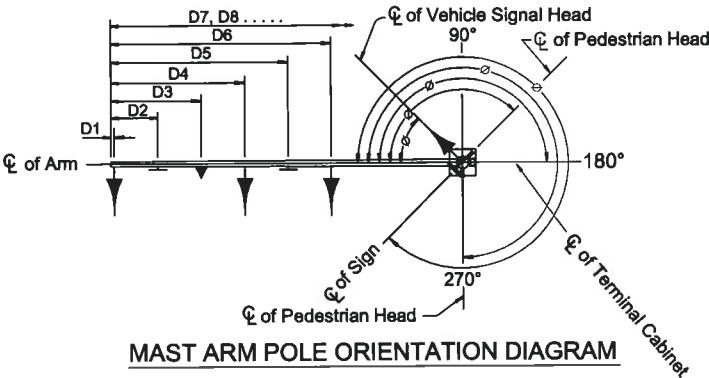
V2 = Traffic Signal Type 2, Adjustable Bracket Mount Tenon Not Required (See Std Dwg. TM460 & TM462)  
V5 = Traffic Signal Type 5, Adjustable Bracket Mount Tenon Not Required (See Std Dwg. TM460 & TM462)  
V6LX = Traffic Signal Type 6LX, Adjustable Bracket Mount Tenon Not Required (See Std Dwg. TM460 & TM462)  
SA = Sign, 30" x 36" Aluminum w/Adjustable Bracket Mount Tenon Not Required (See Std Dwg. TM465)  
ST = Street Name Sign, Aluminum  
F = Fire Preemption (See Std Dwg TM465)  
VDC = Video Detection Camera



PEDESTRIAN PEDESTAL / VEHICLE PEDESTAL  
ORIENTATION DIAGRAM

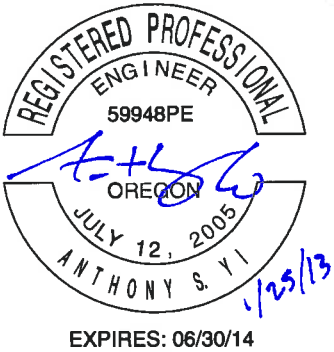
NOTE

Equipment shown on the orientation diagram is a clarification of angles of equipment that may be located on a Pedestrian Pedestal or Vehicle Pedestal



NOTE

Equipment shown on orientation diagram is clarification of distance and angles of equipment that may be located on a Mast Arm or Signal Pole



PROJECT NUMBER  
10444



WASHINGTON COUNTY  
OREGON  
DEPARTMENT OF  
LAND USE &  
TRANSPORTATION

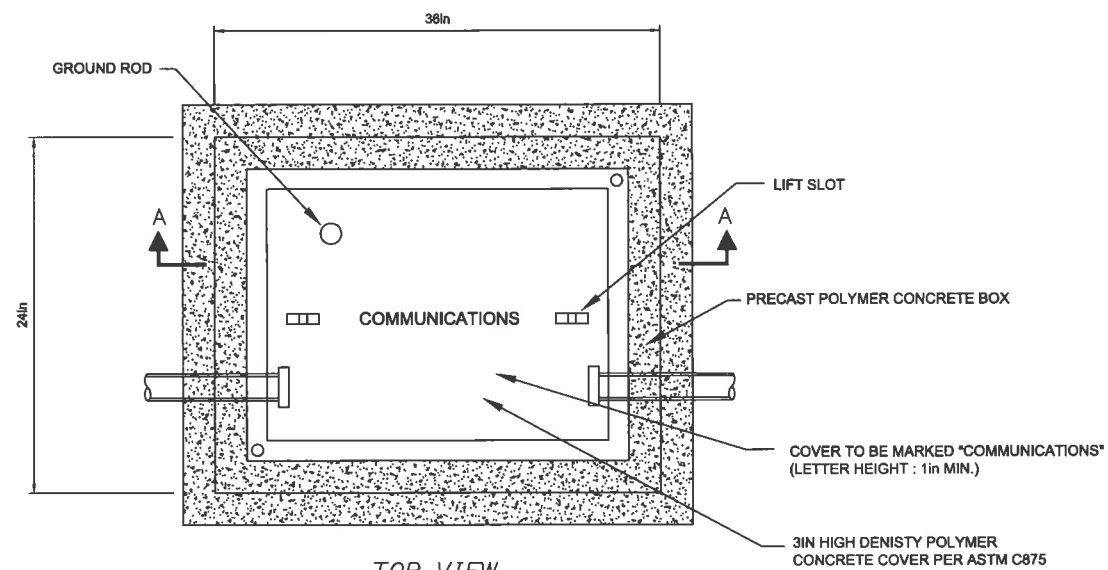
BY DATE  
ADDENDUM 1 (1/25/13) ASY/AMT  
DRWN AMT 01/13  
DSGN ASY 01/13  
CHKD CWR 01/13

N.E. VETERANS DR.  
N.E. BROOKWOOD PKWY.  
WASHINGTON COUNTY  
TRAFFIC SIGNAL DETAILS

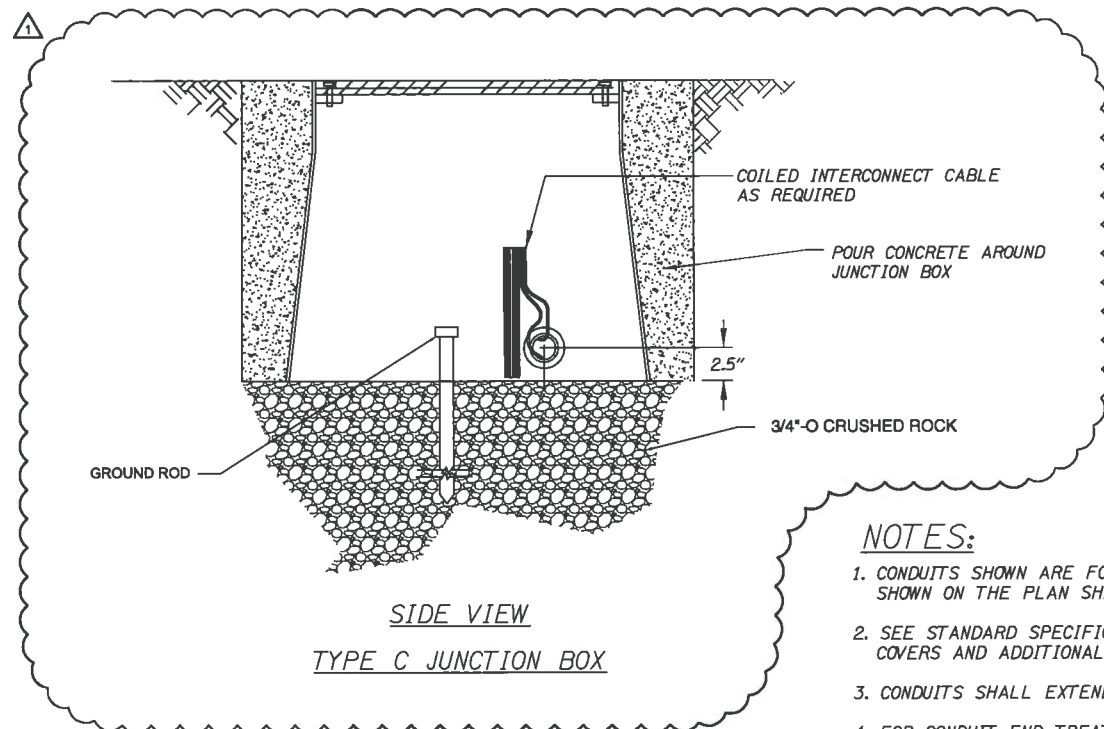
SHEET NO.  
5 OF 10  
SHEET TITLE  
TS-5



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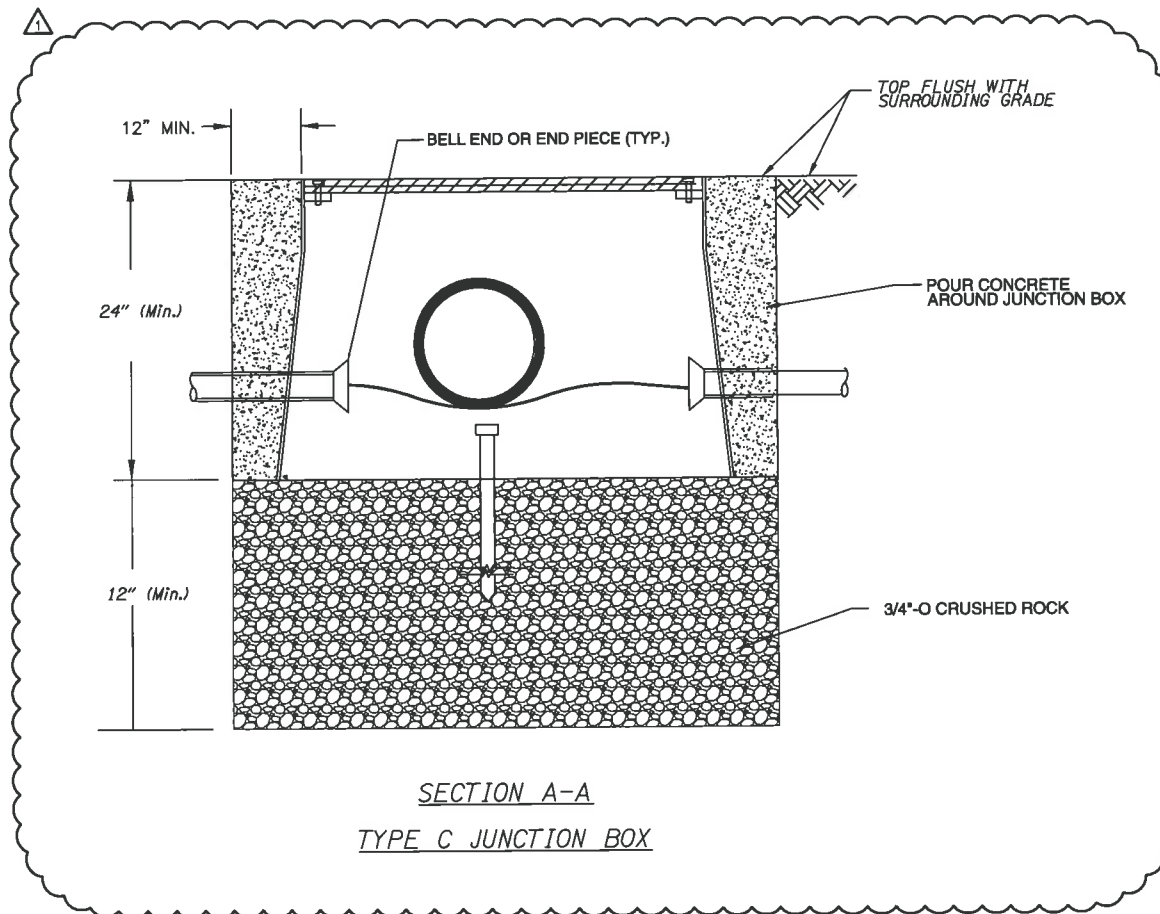
TOP VIEW  
NOT TO SCALE



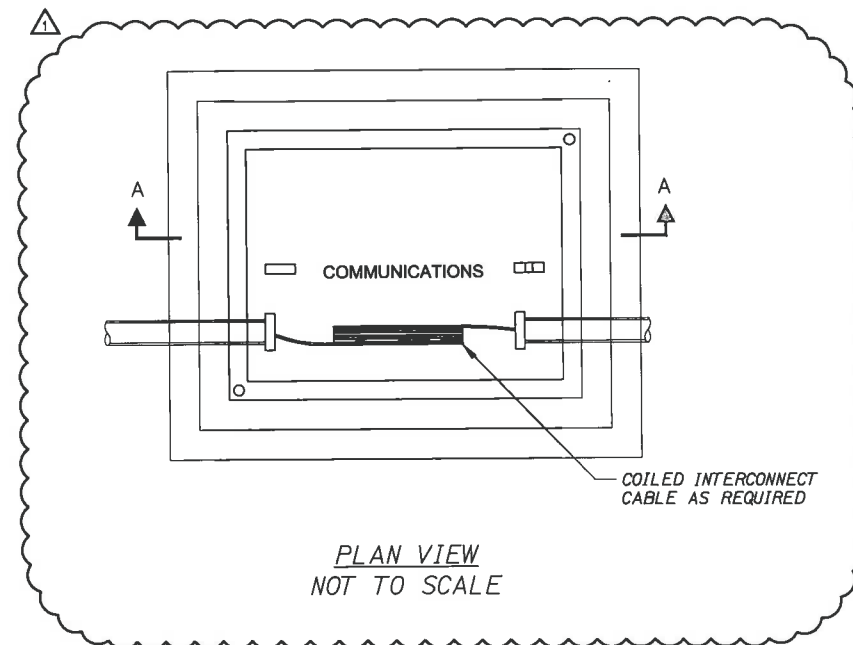
SIDE VIEW  
TYPE C JUNCTION BOX

**NOTES:**

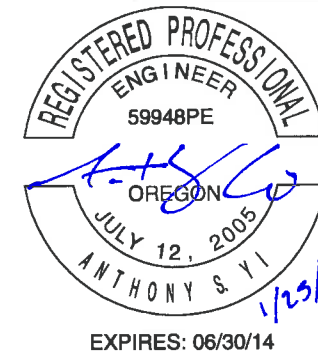
1. CONDUITS SHOWN ARE FOR EXAMPLE ONLY. ADDITIONAL CONDUITS MAY BE REQUIRED AS SHOWN ON THE PLAN SHEETS.
2. SEE STANDARD SPECIFICATIONS SECTION 960.42 REGARDING HOLD-DOWN BOLTS FOR TRAFFIC COVERS AND ADDITIONAL REQUIREMENTS.
3. CONDUITS SHALL EXTEND INTO THE JUNCTION BOX A NOMINAL 2in FROM THE INSIDE WALL.
4. FOR CONDUIT END TREATMENT REFER TO ODOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION (SEE SECTION 960.42) AND OREGON STANDARD DRAWING LATEST EDITION (TM472).
5. AFTER REMOVING THE EXISTING JUNCTION BOXES, THE CONTRACTOR SHALL ADJUST THE OPENINGS TO FIT THE NEW COMMUNICATION BOXES.
6. ALL EXISTING CONDUIT ELBOWS WITHIN THE EXISTING JUNCTION BOXES SHALL REMAIN INTACT EXCEPT THE INTERCONNECT CONDUIT. THE INTERCONNECT CONDUITS SHALL BE SPLICED AND EXTENDED THROUGH THE SIDES OF THE NEW COMMUNICATION BOXES.
7. IN JUNCTION BOXES WHERE THERE ARE EXISTING WIRES AND CONDUITS, THE CONTRACTOR SHALL ADJUST THEM AS NECESSARY TO MAINTAIN THE SYSTEM WHEN WORK IS COMPLETE.
8. THE CONTRACTOR SHALL FILL MATERIALS (SOIL OR CONCRETE) SURROUNDING THE NEW COMMUNICATION JUNCTION BOX TO SATISFACTION OF THE ENGINEER.



SECTION A-A  
TYPE C JUNCTION BOX



PLAN VIEW  
NOT TO SCALE



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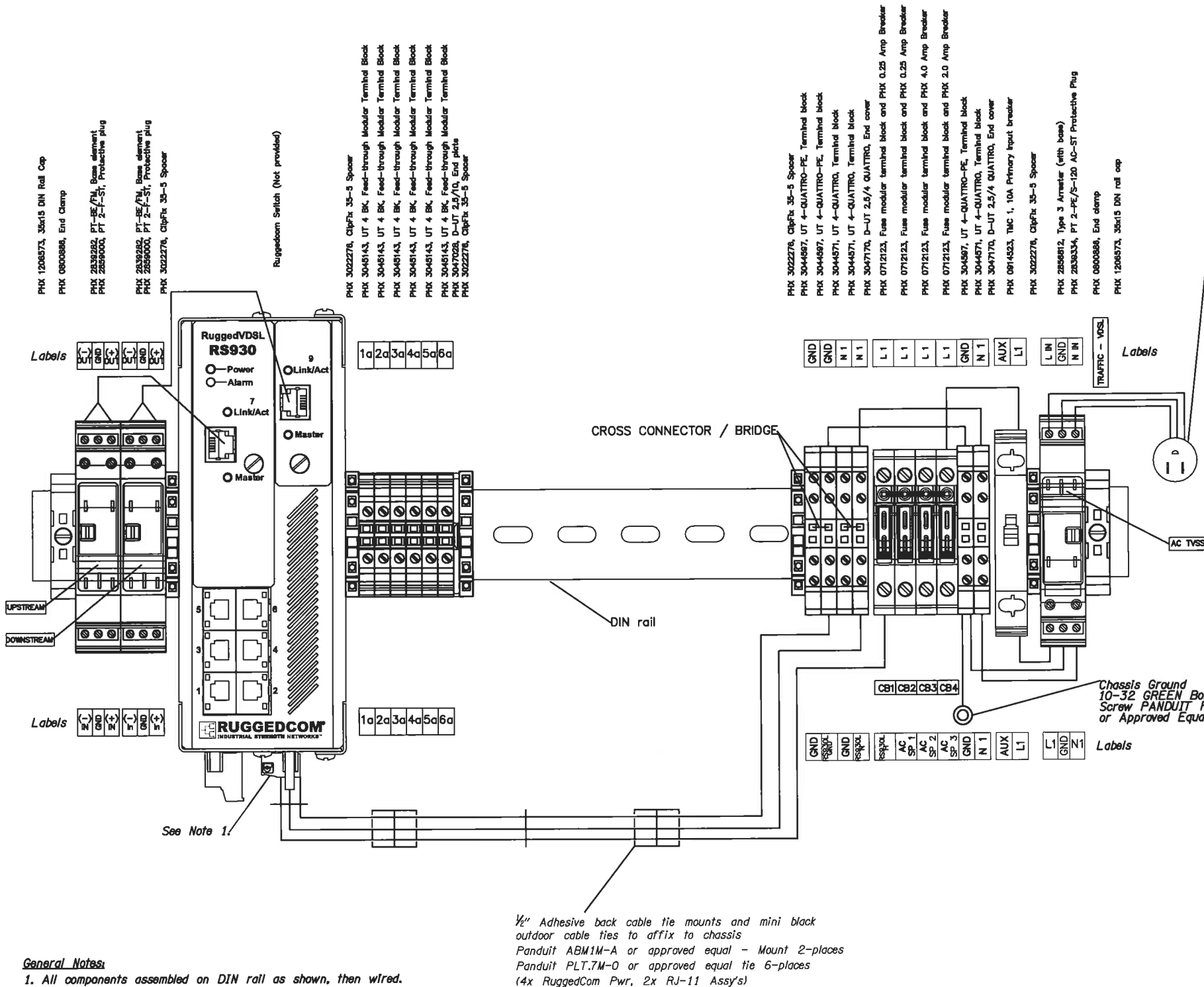
BY DATE  
DRWN AMT 01/13  
DSGN ASY 01/13  
CHKD CWR 01/13

N.E. VETERANS DR. -  
N.E. BROOKWOOD PKWY.  
WASHINGTON COUNTY

INTERCONNECT DETAILS

SHEET NO.  
8 OF 10  
SHEET TITLE  
TS-8





**General Notes:**

1. All components assembled on DIN rail as shown, then wired.
2. Communication panels shall be assembled and wired by the manufacturer.
3. All point-to-point wire to be UL 1015, 600v PVC Insulated, Stranded, tinned copper. black (hot) and white (neutral) wire to be 16 awg, green/yellow (ground) wire to be 16 awg.
4. All wires to be terminated with Insulated wire ferrules where attached to terminal blocks, and ring terminal for chassis gnds (gnd Terminal 1, and RS930L). (green ground screw added for chassis ground).
5. Heat shrink wire labels provided for UPSTREAM and DOWNSTREAM RJ-11 pigtails.
6. DIN rail end caps installed to prevent any input and output wiring from contacting sharp ends of cut DIN rail.
7. Label components as shown.

**Notes:**

1. Pre-wire power feed to RuggedCom into Phoenix Contact Combination plug, P/N: "MVSTBW-2.5/5(3)-STF-5.08" or approved equal.

**DIN RAIL COMPONENT ASSEMBLY**

Phoenix Order # or Approved Equal	Description	Qty.
1206573	NS 35/15, DIN rail cap	2
0800886	E/NS 35 N, End clamp	2
3022276	ClipFix 35-5 Spacer	5
2839282	PT-BE/FM, Base element *	2
2859000	PT 2-F-ST, Protective plug *	2
3045143	UT 4 BK, Feed-through modular terminal block	6
3047028	D-UT 2.5/10, End Plate	1
3044597	UT 4-QUATTRO-PE, Ground terminal block	3
3044571	UT 4-QUATTRO, Four-conductor universal terminal block	3
3047170	D-UT 2.5/4 QUATTRO, End cover	2
3118203	UK 6-FSI/C, Fuse modular terminal block	4
0712123	TCP 0.25A, Fuse modular terminal block	1
0712194	TCP 1A, Fuse modular terminal block	1
0712259	TCP 4A, Fuse modular terminal block	2
0203263	FBI 10- 8, Cross connector/bridge	1
0914523	TMC 1 M1 100 10.0A, Fuse modular terminal block	1
2856812	PT 2-PE/S-120AC/FM, Type 3 arrester	1
-	MVSTBW 2.5/5(3)-STF-5.08 (See Note 1)	1
0818085	UC-TM 6, Terminal labels - Printed	-
0818072	UC-TM 8, Terminal labels - Printed	-
0819262	UC-TMF 16, Label sheet - Printed	-
0809421	KLM-A, End label	-

\* Part required for twisted pair application

**COMMUNICATION SUB-PANEL ASSEMBLY**

URS Electronics Part No.	Description	Qty.
6610247	19" Rack Mountable Non-hinged Communication Sub-Panel	1

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DEPARTMENT OF  
LAND USE &  
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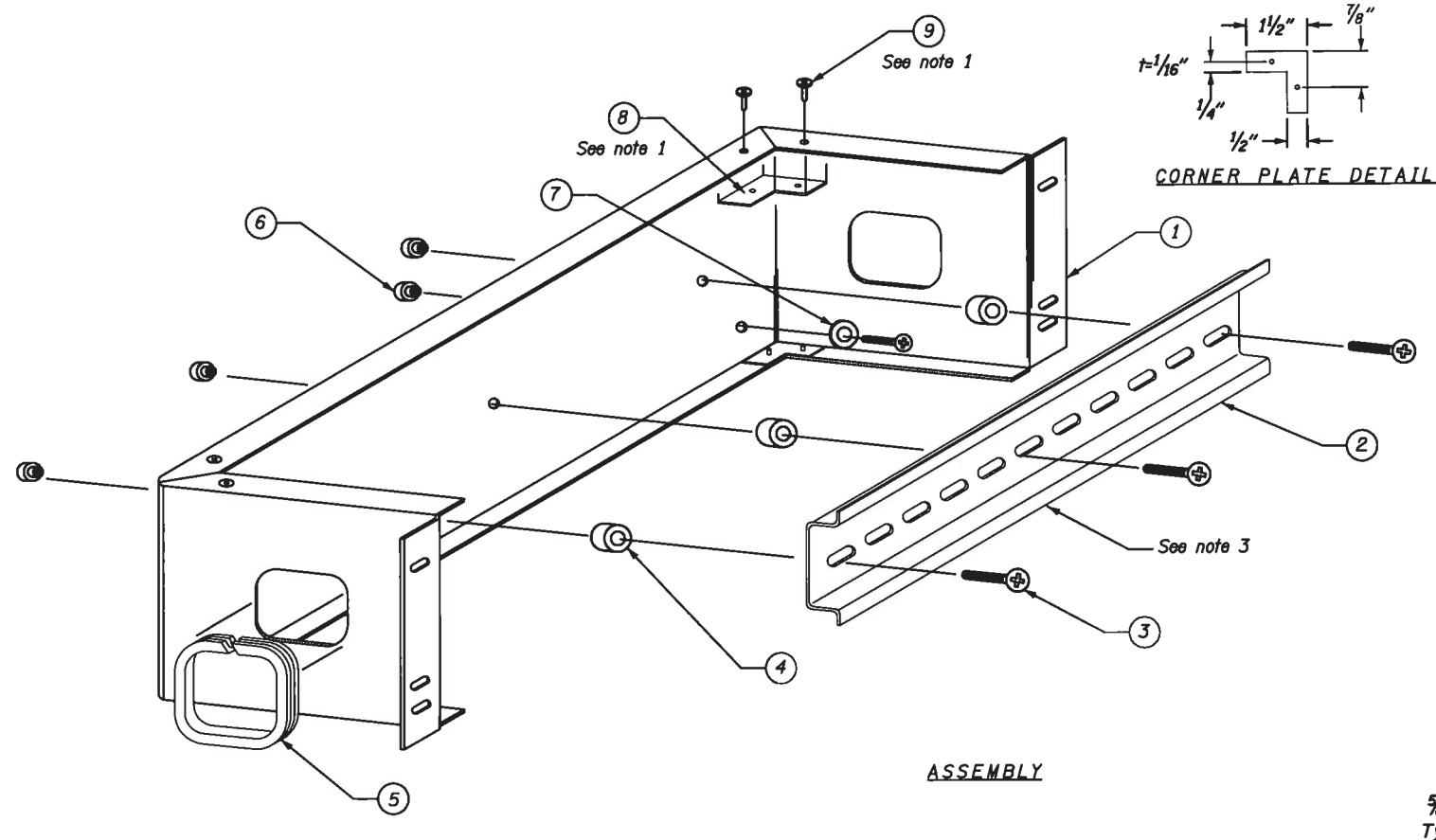
BY DATE  
AMT 01/13  
ASV 01/13  
CWR 01/13

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WASHINGTON COUNTY

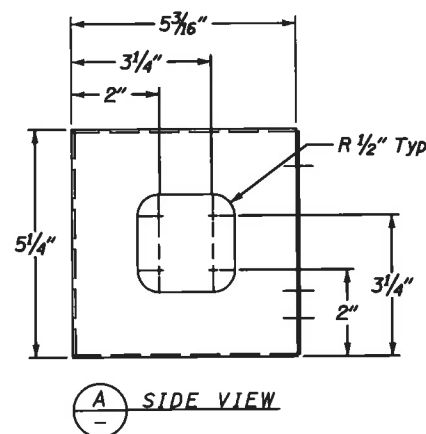
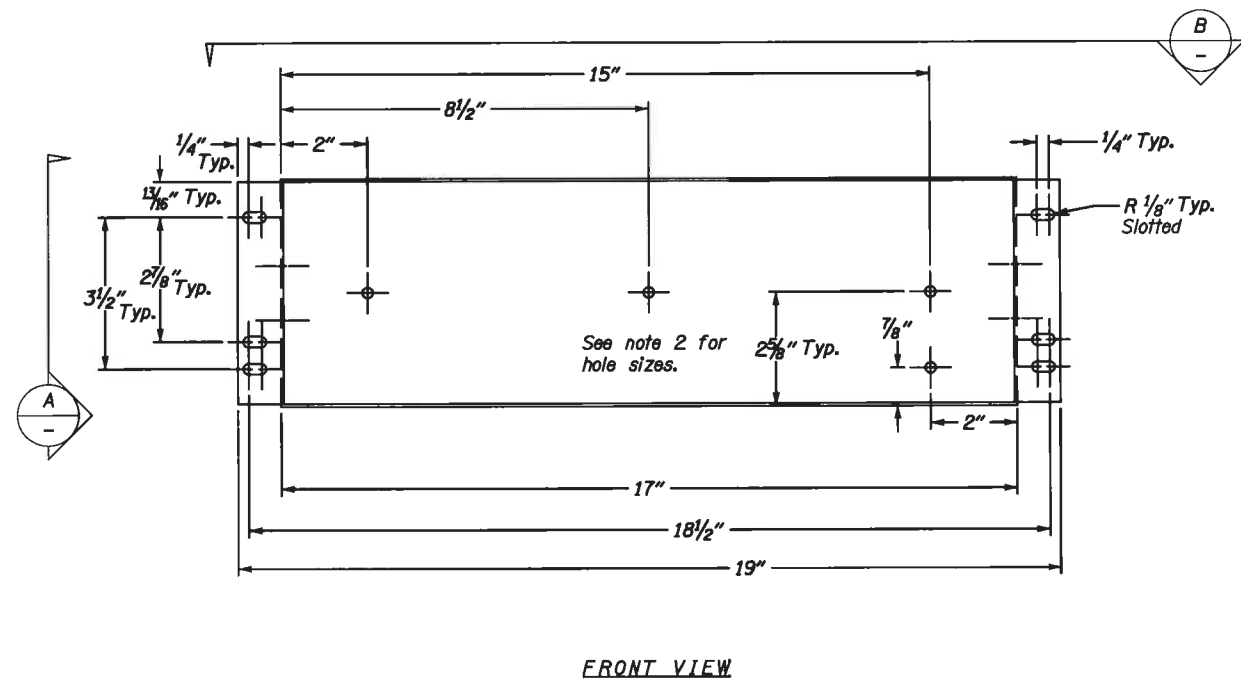
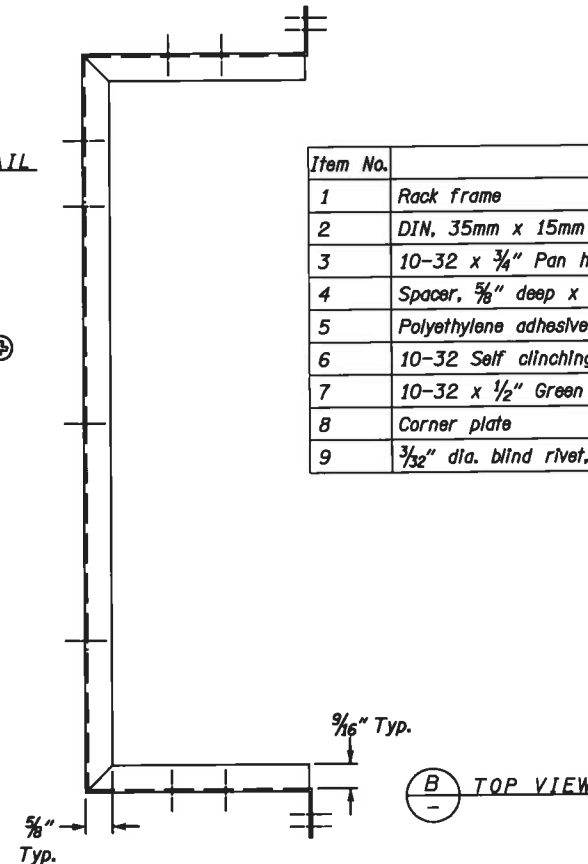
INTERCONNECT DETAILS

SHEET NO.  
9 OF 10  
SHEET TITLE  
TS-9

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Item No.	Part	Material	Qty.
1	Rack frame	Alum. plate 5052 H-32, 1/16"	1
2	DIN, 35mm x 15mm deep, pre-punched - 16" long	Electrolitically plated steel	1
3	10-32 x 3/4" Pan head machine screw	Type 304 Stainless	3
4	Spacer, 5/8" deep x 1/4" I.D. x 5/8" O.D.	Aluminum or HDPE	3
5	Polyethylene adhesive lined grommet edging	Polyethylene	2
6	10-32 Self clinching sheet metal nut	Type 304 Stainless	4
7	10-32 x 1/2" Green bonding screw w/ washer	Type 304 Stainless	1
8	Corner plate	Alum. plate 5052 H-32, 1/16"	4
9	3/32" dia. blind rivet, button head	Aluminum	8



- General notes:**
1. Fabricate rack frame using bends of single aluminum sheet.
  2. Inside minimum bend radii are 1/52".
  3. Remove all sharp corners.
  4. All dimensional tolerances are +/- 1/52".
  5. See other sheet for component assembly.

- Notes:**
1. Drill/punch and blind rivet corner plates on each inside corner.
  2. Drill/punch holes as required to secure self clinching metal nuts.
  3. Pre-punched DIN rail may be substituted with solid DIN rail. Drill thru holes as necessary for 10-32 screws.

PROJECT NUMBER  
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WASHINGTON COUNTY  
OREGON  
DEPARTMENT OF  
LAND USE &  
TRANSPORTATION

BY  
AMT  
1/25/13  
ADDENDUM 1 (1/25/13) ASY/AMT

BY DATE  
DRWN AMT 01/13  
DSGN ASY 01/13  
CHKD CWR 01/13

N.E. VETERANS DR. -  
N.E. BROOKWOOD PKWY.  
WASHINGTON COUNTY  
INTERCONNECT DETAILS

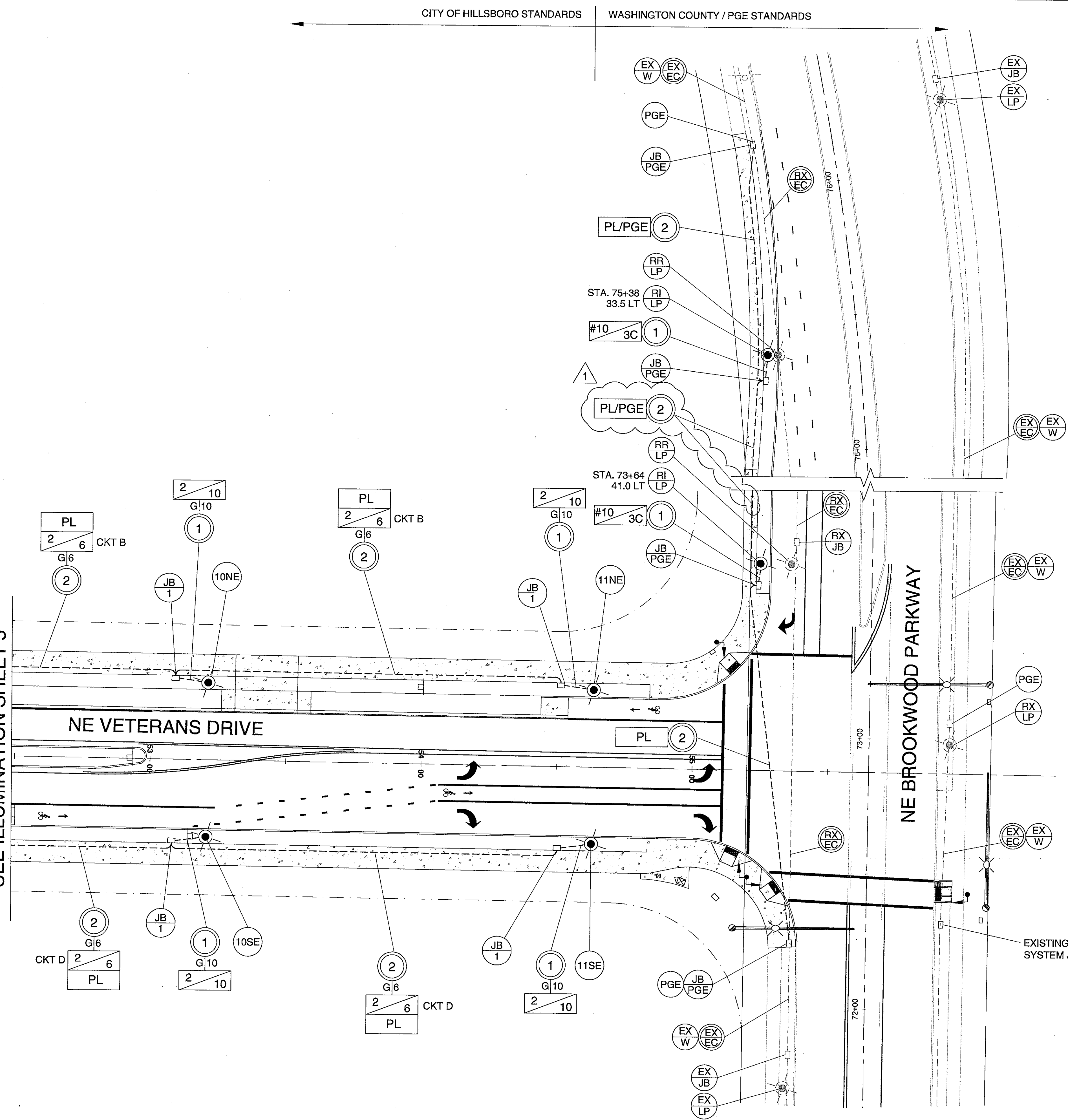
SHEET NO.  
10 OF 10  
SHEET TITLE  
TS-10



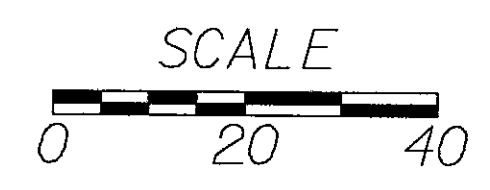




MATCHLINE - STA 52+50  
SEE ILLUMINATION SHEET 5



ILLUMINATION PLAN  
NE VETERANS DRIVE



LIGHTING NOTE:  
1. SEE SHEET 1 FOR LEGEND

PROJECT ENGINEER: CITY INSPECTOR: CONTRACTOR: PIPE SUPPLIER:	SHEET 6 OF 8	NE VETERANS DR STA. 52+50 TO STA. 55+00 ILLUMINATION PLAN	CITY OF HILLSBORO 150 EAST MAIN STREET - 4TH FLOOR HILLSBORO, OREGON 97123-4089 PHONE: (503) 681-6146 FAX: (503) 681-6245	DESIGNED: ASY/DDD CHECKED: ASY	DRAWN: AMT/DDD CHECKED: CWR	ELECTRONIC FILE: 11200_LUM_T00.DWG   PLOT DATE: January 25, 2013	10444

SCALE	AS SHOWN	PLAN	HORIZ.	VERT.
			NA	NA
		PROFILE	NA	NA
			AMT	APPD
			BY	
			DATE	
			NO.	
			REVISION	
			ADDENDUM 1	